

## Claims

1. A process analysis system characterised in that it comprises a first radio system associated with an input part of a processing system, and a  
5 second radio system associated with an output part of the processing system, and a Radio Frequency Identification (RFID) tag associated with an item to be processed, and data logging means in communication with the first and second radio systems, wherein the first and second radio systems are arranged to communicate with the RFID tag as it passes through the  
10 processing system and to pass data associated therewith to the data logging means, so as to record parameters associated with the processing system.
2. A process analysis system as claimed in claim 1 wherein the RFID tag is applied to an item to be passed through a waste product sorting facility.  
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3. A process analysis system as claimed in claim 1 or claim 2 wherein the RFID tag does not contain an internal power source, and is arranged, on interrogation from either the first or second radio systems, to transmit an identity code.  
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4. A process analysis system as claimed in any of claims 1 to 3 wherein the data logging means is arranged to record information relating to the time interval taken for the RFID tag to pass from the first radio system to the second radio system.  
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5. A process analysis system as claimed in any of the above claims wherein a third radio system is associated with a second output of the processing system, and the data logging means is arranged to record at which output the RFID tag arrives after passing through the processing means.  
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6. A process analysis system as claimed in any of the above claims wherein the data logging means comprises a computer system.

7. A process analysis system as claimed in any of the above claims wherein the RFID tag is able to store information written to it using a radio frequency field.

5 8. A process analysis system as claimed in claim 7 wherein a transmitter is arranged to write data to the RFID tag as it passes through the processing system.

10 9. A process analysis system as claimed in any of the above claims wherein the data logging means is arranged calculate statistics pertaining to the processing system based upon parameters provided relating to the quantity and percentage of items associated with a tag and the data measured using the radio systems.

15 10. A method of analysing a processing system characterised in that it comprises the steps of :

attaching to an item to be processed a Radio Frequency Identification (RFID) tag;

20 reading information from the RFID tag using a first radio system associated with an input to the processing system as the item is passed into the input;

reading information from the RFID tag using a second radio system associated with an output of the processing system as the item is passed from the output;

25 passing information relating to the tag from the first and second radio systems to data logging means.

11. A method as claimed in claim 10 wherein the RFID tag is applied to an item to be passed through a waste product sorting facility.

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12. A method as claimed in claim 10 or claim 11 wherein the data logging means records information relating to the time interval taken for the RFID tag to pass from the first radio system to the second radio system.

13. A method as claimed in any of the claims 10 to 12 wherein a third radio system is associated with a second output of the processing system, and the data logging means records at which output the RFID tag arrives after passing through the processing means.